



January 7, 2002  
Project No. 97664V3

Mr. Todd Croft  
Nevada Division of Environmental Protection  
555 E. Washington, Suite 4300  
Las Vegas, Nevada 89101-1049

PROVIDING

- Geotechnical Engineering
- Construction Materials Engineering
- Environmental Engineering
- Drilling Services

*RE: Results of monthly surface water sampling of the Las Vegas Wash at the Northshore Road Bridge.*

Dear Mr. Croft:

Per your request, Geotechnical & Environmental Services, Inc. (GES) obtained a surface water sample from the Las Vegas Wash on December 27, 2001 near the Northshore Road Bridge. We sent this sample, under chain-of-custody protocol, to NEL Laboratories (NEL) for laboratory analysis of perchlorate. NEL's analysis revealed a perchlorate concentration of 440 micrograms per Liter ( $\mu\text{g/L}$ ). The NEL report is included with this letter, along with Perchlorate Summary Tables for 2000 and 2001. We have also included trend chart for 2001 and a comparison trend chart of the 2000 and 2001 data presented on the summary tables.

In addition to the sample GES collected and submitted to NEL, a split sample was collected per the request of Mr. Kevin Mayer, with the US Environmental Protection Agency (USEPA). This split sample was collected at the same time and in the same manner as the sample submitted to NEL, and was sent, under chain-of-custody protocol, to the USEPA Laboratory in Richmond, California.

Our services were performed using that degree of care and skill ordinarily exercised under similar circumstances by reputable engineering firms in this or similar localities. No other warranty, either express or implied, is included or intended in this report.

We appreciate this opportunity to provide our services. If you have any questions regarding these results, please feel free to call us at 365-1001.

Sincerely,

**Geotechnical & Environmental Services, Inc.**



Richard Cooke  
Staff Geologist



Daniel C. Burns, C.E.M.\*  
#1692 (Expires 10/07/2003)  
Project Manager

"I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances."

dn

Enc: 2000 & 2001 Perchlorate Summary Tables  
NEL Analytical Report  
2001 Trend Chart  
2000 & 2001 Comparison Trend Chart

Dist: 1 original mailed to addressee  
1 faxed to addressee at 486-2863  
cc: fax to Jeff Gibson, American Pacific Corporation  
cc: mail to Kevin Mayer, USEPA SFD 72, 75 Hawthorne Street, San Francisco, CA 94105  
cc: to project file 97664V3

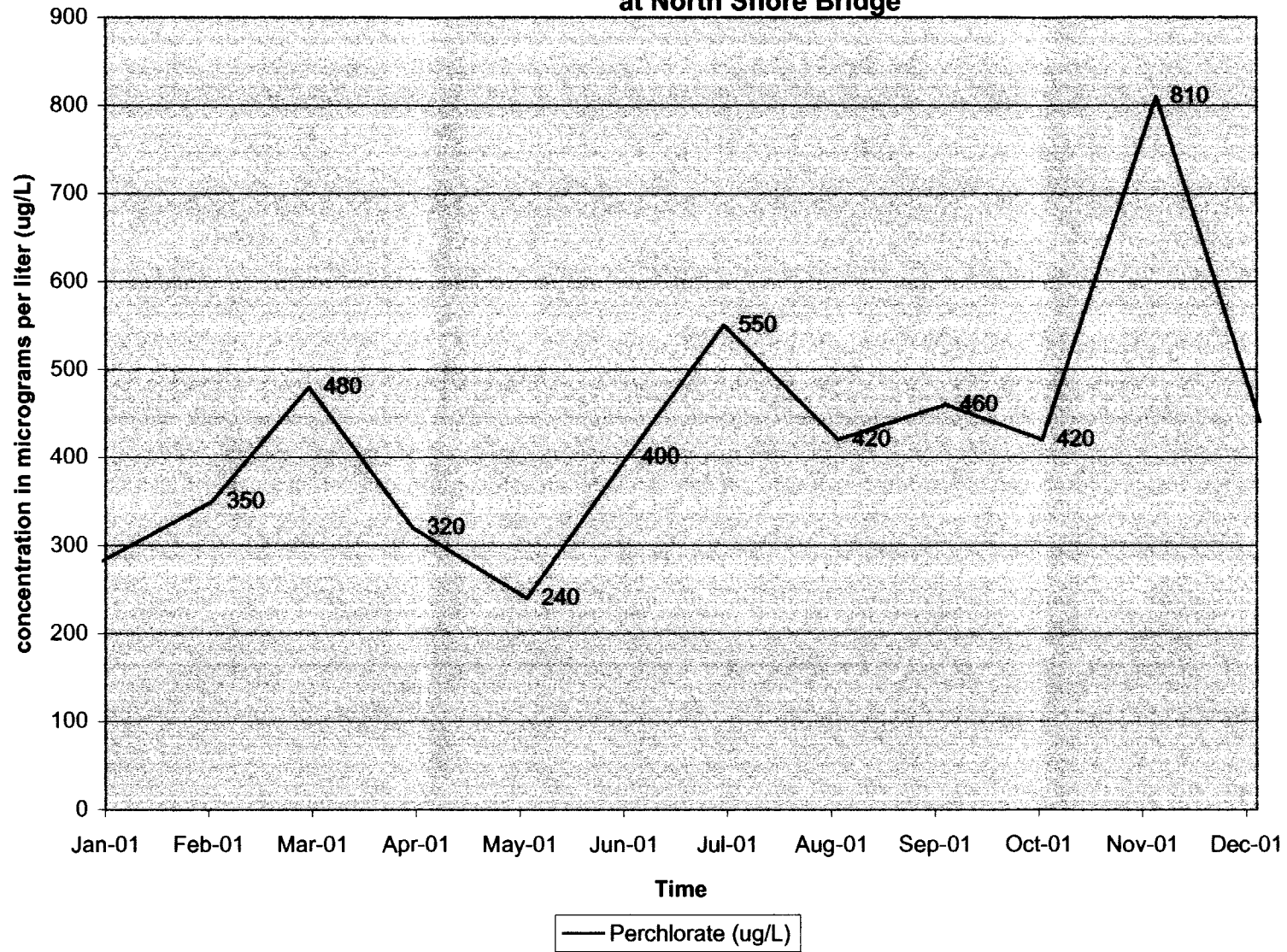
**Las Vegas Wash at Northshore Road Bridge  
2000 Summary of Perchlorate Concentrations**

<b>Date Sampled</b>	<b>Perchlorate (µg/L)</b>
1/27/00	569
2/28/00	720
3/29/00	870
4/27/00	750
5/30/00	740
6/28/00	410
7/27/00	650
8/28/00	510
9/27/00	430
10/26/00	340
11/29/00	370
12/26/00	320

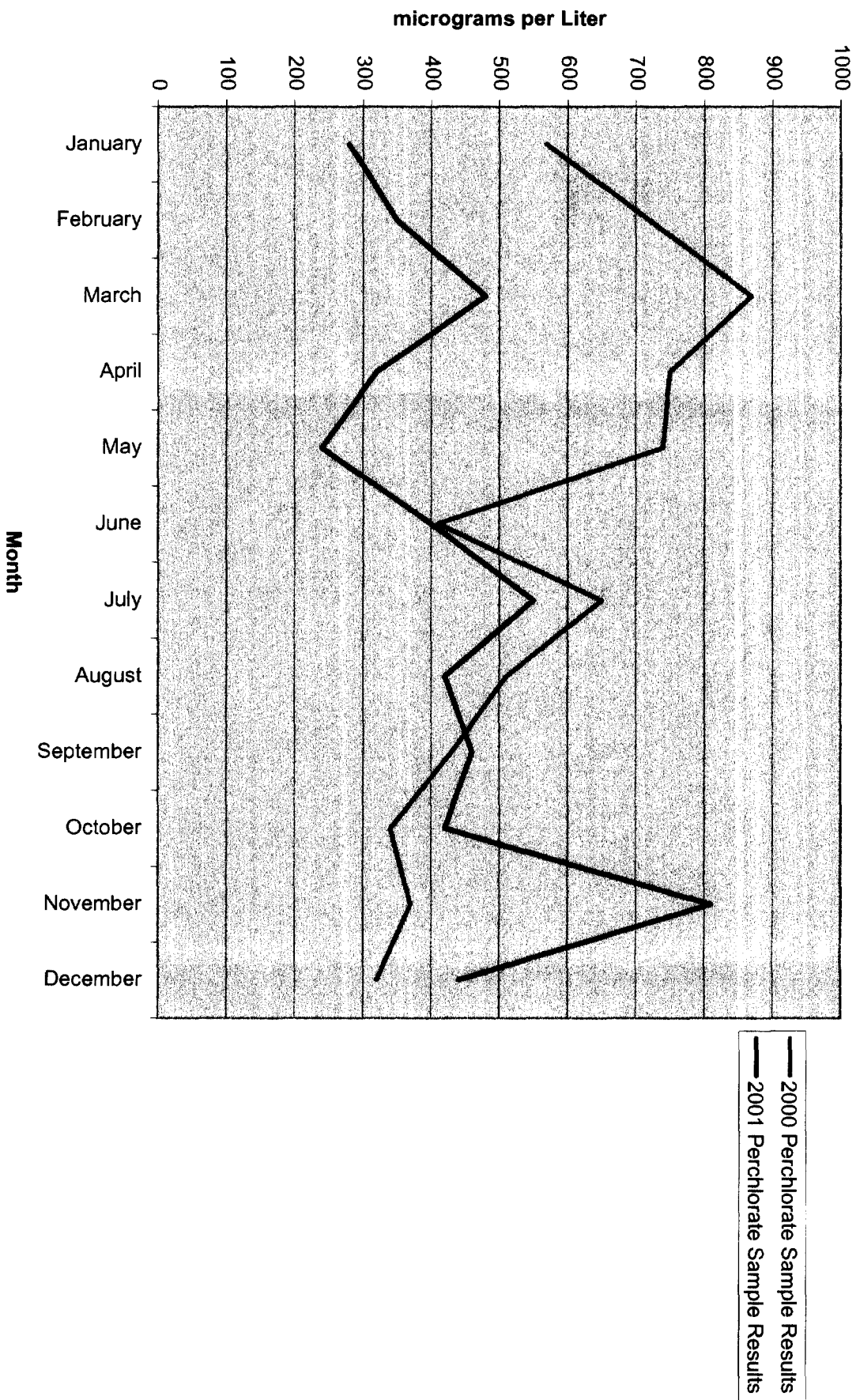
**Las Vegas Wash at Northshore Road Bridge  
2001 Summary of Perchlorate Concentrations**

<b>Date Sampled</b>	<b>Perchlorate (µg/L)</b>
1/25/01	280
2/27/01	350
3/27/01	480
4/26/01	320
5/29/01	240
6/27/01	400
7/25/01	550
8/27/01	420
9/27/01	460
10/25/01	420
11/27/01	810
12/27/01	440

**Year 2001**  
**Las Vegas Wash Perchlorate Concentration**  
**at North Shore Bridge**



# Las Vegas Wash North Shore Bridge Sample Results Summary



## NEL LABORATORIES

Reno • Las Vegas  
Phoenix • BoiseLas Vegas Division  
4208 Arcata Way, Suite A • Las Vegas, Nevada 89030  
702-657-1010 • Fax: 702-657-1577  
1-888-368-3282

CLIENT: Geotechnical & Env. Serv.  
7150 Placid  
Las Vegas, NV 89119  
ATTN: Dan Burns

PROJECT NAME: FPF  
PROJECT NUMBER: 97664 V3

NEL ORDER ID: L0112269

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 12/27/01.

Should you have any questions or comments, please feel free to contact our Client Services department at (702) 657-1010.

  
Steve Van Wagenen  
Laboratory Manager

1/3/02  
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Arizona	AZ0520	AZ0518	AZ0605
California	1707	2002	2264
US Army Corps of Engineers	Certified	Certified	

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
L.A.C.S.D.			10228

**NEL LABORATORIES**

CLIENT: Geotechnical & Env. Serv.  
PROJECT ID: FFF  
PROJECT #: 97664 V3

CLIENT ID: North Shore Road Bridge  
DATE SAMPLED: 12/27/01  
NEL SAMPLE ID: L0112269-01

TEST: Inorganic Non-Metals  
MATRIX: Aqueous

<u>PARAMETER</u>	<u>RESULT</u>	<u>R. L.</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Perchlorate	440	40.	10	EPA 314	µg/L	12/31/01

R.L. - Reporting Limit

D.F. - Dilution Factor

ND - Not Detected

*This report shall not be reproduced except in full, without the written approval of the laboratory.*

**NEL LABORATORIES**

CLIENT: Geotechnical & Env. Serv.  
PROJECT ID: FPF  
PROJECT #: 97664 V3  
TEST: Non-Metals

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 011231CLO4-BLK

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Perrchlorate	ND	4	1	EPA 314	µg/L	12/31/01

D.F. - Dilution Factor

ND - Not Detected

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# LETTER OF TRANSMITTAL

## GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

7150 Placid Street  
Las Vegas, Nevada 89119  
(702) 365-1001 (702) 341-7120 (FAX)

TO: Nevada Division of Environmental Date: January 8, 2002  
Protection  
555 E. Washington, Suite 4300 PROJECT: Las Vegas Wash at  
Las Vegas, Nevada 89101-1049 Northshore Road Bridge  
ATTN: Mr. Todd Croft GES PROJECT # 97664V3

### WE ARE FORWARDING THE ITEMS LISTED BELOW VIA:

       MESSENGER        PICK UP        X U.S. MAIL        "NEXT DAY"

<u>COPIES</u>	<u>DESCRIPTION</u>
<u>1</u>	<u>Results of monthly surface water sampling of the Las Vegas Wash at the Northshore Road</u>
<u>      </u>	<u>Bridge</u>
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THESE ITEMS ARE SENT FOR:        REVIEW        COMMENT        APPROVAL        USE  
       SIGN & RETURN        OTHER:       

REMARKS:         
      

THIS MATERIAL SENT BY: Daniel C. Burns, C.E.M.  
PLEASE SIGN AND RETURN ONE COPY OF TRANSMITTAL.

RECEIVED BY:        TIME:        DATE:       

OTHER DISTRIBUTION:  
1 copy mailed to Kevin Mayer, USEPA SFD 72, 75 Hawthorne Street, San Francisco, California 94105  
1 copy faxed and delivered to Jeff Gibson, American Pacific Corporation

If enclosures are not as noted, please notify us at once.